

ABSTRACT OF THE DISCLOSURE

[0045] This invention provides a small, high efficiency, oil free motor driven compressor/blower suitable for providing pressurized, contamination-free gas and or air to transportation, industrial and aerospace fuel cell systems or other contaminant-intolerant applications. The motor driven compressor/blower rotor assembly is supported by foil air bearings and rotates at high speed by using a high frequency drive. The impeller is a centrifugal type design. The MDC can be easily integrated into the air management system of a fuel cell.